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7590

08/12/2003

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EXAMINER

KOVALICK, VINCENT E

ART UNIT

PAPER NUMBER

2673

DATE MAILED: 08/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/823,254

Applicant(s)

BROWN ET AL.

Examiner

Vincent E Kovalick

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 May 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-18, 20-30 and 32-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-18, 20-22, 25-27, 29, 30 and 35-41 is/are rejected.
- 7) ☒ Claim(s) 23-24, 28, 32-34 and 42 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This Office Action is in response to Applicant's Amendment dated May 22, 2003 in response to USPTO Office Action dated March 27, 2003. The amendment to the specification; the cancellation of claims 1, 19, and 31; the amendments to claims 2, 20, 29-30, the addition of new claims 35-42 and Applicant's remarks have been noted and entered in the record. The amendments to claims 2, 20 and 29 render moot Applicant's remarks relative to said claims 2, 20 and 29.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 2-4, 8-10, 15, 35, 37 and 41 are rejected under 35 U.S.C. 102(e) as being anticipated by Kaufmann (USP 4,346,260).

Relative to claims 2, Kaufmann **teaches** a method and apparatus to control a drawing machine attached to a computer; Kaufmann further **teaches** a drawing tablet comprising a translucent surface and an imaging sensor mounted below the surface, the imaging sensor designed to capture an image on the surface even if the image is occluded from above (col. 2, lines 20-27 and Fig. 1).

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Regarding claims 3 and 4, Kaufmann further **teaches** said drawing tablet further comprising transmission means designed to transmit the image captured by the imaging sensor to a computer; and transmission means includes a cable coupled to the drawing tablet and to the computer (col. 2, lines 27-35 and Fig. 1, items 4 and 5).

As to claims 8-9, Kaufmann **teaches** the drawing tablet further comprising an erasable pen designed to draw on the surface, said drawing tablet further comprising an eraser for erasing marks produced by the erasable pen (col. 1, lines 49-55 and col. 3, lines 15-19).

Regarding claim 10, Kaufmann **teaches** said drawing tablet wherein the image is hand-drawn with the erasable pen (col. 1, lines 49-55 and col. 3, lines 15-19).

Relative to claims 15, 37 and 41, Kaufmann **teaches** further comprising light projecting means (col. 2, lines 39-42 and Fig. 1, item 12).

Regarding claim 35, Kaufmann **teaches** a drawing tablet comprising: a translucent surface; and an imaging sensor mounted below the surface, the imaging sensor designed to capture an image on the surface even if the image is occluded from above and to capture images of physical objects placed on the surface (col. 2, lines 21-30 and Abstract).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaufmann as applied to claim 1 in item 4 hereinabove.

Regarding claim 5, Kaufmann **does not teach** said drawing table wherein the transmission means comprises a wireless transmitter designed to wirelessly transmit the image to a wireless receiver coupled to a the computer.

Kaufmann discloses an apparatus to control a drawing machine attached to a computer wherein the drawing means are attached to a computer by means of cables. It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide the device as taught by Kaufmann with wireless transmission means in order to adapt the system for use in an environment where the use of cabling is not a practical means for communicating between the drawing tablet and the system computer.

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaufmann as applied to claim 2 in item 3 hereinabove, and further in view of Inuzuka et al. (USP 5,812,274).

Relative to claim 6, Kaufmann **does not teach** a drawing tablet further comprising software in a computer designed to adjust the image to compensate for distortion by the imaging sensor.

Inuzuka et al. **teaches** an image signal processing apparatus (col. 2, lines 13-39); Inuzuka at al. further **teaches** software in a computer designed to adjust the image to compensate for distortion by the imaging sensor (col. 1, lines 17-25).

Kaufmann teaches a method and apparatus to control a drawing table attached to a computer, Inuzuka et al. provides image signal processing means including image distortion enhancement means. It would have been obvious to a person of ordinary skill in the art at the time of the

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invention to provide to the device as taught by Kaufmann the feature as taught by Inuzuka et al. in order to provide the means to produce an enhanced uniform image signal.

7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaufmann as applied to claim 2 in item 3 hereinabove, and further in view of Hirasawa et al. (USP 6,456,319).

Regarding claim 7, Kaufmann **does not teach** the drawing tablet further comprising software in a computer designed to adjust the image to compensate for a reversed image captured by the imaging sensor.

Hirasawa et al. **teaches** an image sensing apparatus (col. 3, lines 49-67; col. 4, lines 1-67; col. 5, lines 1-67 and col. 6, lines 1-67); Hirasawa et al. further **teaches** a signal processor to adjust the image to compensate for a reversed image captured by the imaging sensor (col. 8, lines 48-55).

Kaufmann teaches a method and apparatus to control a drawing table attached to a computer, Hirasawa et al. teaches image sensing apparatus having a function of reading an image form a negative mode and producing said image in a positive mode. It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Kaufmann the means as taught by Hirasawa et al. in order to provide the means for converting an image from a negative mode to a positive mode for display and further processing.

8. Claims 11, 14 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaufmann as applied to claim 2 in item 3 hereinabove, and further in view of Kusunuki et al. (USP 6,266,057).

Regarding claims 11, 14 and 36, Kaufmann **does not teach** a drawing table wherein the imaging

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sensor is designed to capture images of physical objects placed on the surface.

Kusunuki et al. **teaches** an information processing system suited for handling images using the actual objects placed on the display surface; Kusunuki et al. further **teaches** a drawing table wherein the imaging sensor is designed to capture images of physical objects placed on the surface (col. 6, lines 6-8 and 23-26).

Kaufmann teaches a method and apparatus to control a drawing table attached to a computer, Kusunuki et al. teaches the means for capturing images of objects placed on the surface of an image display surface. It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide the device as taught by Kaufmann with the means for capturing the image of an object placed on a drawing table in order to eliminate the task of a user having to manually enter the attributes of the said object.

9. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaufmann as applied to claim 2 in item 3 hereinabove, and further in view of Filo (USP 5,604,517).

Regarding claim 12. Kaufmann **does not teach** a drawing tablet wherein the imaging sensor is designed to capture colors in the image on the surface.

Filo **teaches** an electronic drawing device (col. 2, lines 14-67 and col. 3, lines 1-4); Filo further **teaches** a drawing device wherein the imaging sensor is designed to capture colors in the image on the surface (col. 2, lines 38-49).

Kaufmann teaches a method and apparatus to control a drawing table attached to a computer, Filo teaches an electronic drawing device including a drawing instrument detector capable of detecting the color of the image being produced by a drawing instrument. It would have been obvious to a person of ordinary skill in the art at the time of the inventions to provide the device

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as taught by Kaufmann with the feature as taught by Filo to facilitate detection of the color being imparted by the writing instrument and the production of colored images.

10. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaufmann as applied to claim 2 in item 3 hereinabove, and further in view of Lovell et al. (USP 4,952,051).

Relative to claim 13, Kaufmann **does not teach** a drawing tablet further comprising software in a computer designed to animate at least a portion of the image.

Lovell et al. **teaches** an apparatus and method for producing animated drawings (col. 3, lines 33-67; col. 4, lines 1-67; col. 5, lines 1-67 and col. 6, lines 1-6); Lovelle et al. further **teaches** a drawing tablet comprising software in a computer designed to animate at least a portion of the image (col. 25, lines 30-68; col. 26, lines 1-23; Abstract and Fig. 11).

Kaufmann teaches a method and apparatus to control a drawing table attached to a computer, Lovell et al. teaches a method and apparatus for producing animated drawings. It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide the device as taught by Kaufmann with the feature as taught by Lovell et al. in order to put in place the means of enabling the animation of portions of the image as it is presented to the drawing input surface.

11. Claims 16 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaufmann as applied to claim 37 in item 3 hereinabove, and further in view of Harris (USP 5,532,711).

Relative to claims 16 and 38, Kaufmann **does not teach** said drawing tablet wherein a light projecting means includes: a light emitting source; and mirrors designed to reflect the light; and galvanometers designed to move the mirrors to steer light emitting from the light emitting

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source to the surface.

Harris **teaches** a lightweight display system and method of employing the same (col. 1, lines 17-67 and col. 2, lines 1-26); Harris further **teaches** a display system wherein a light projecting means includes: a light emitting source; and mirrors designed to reflect the light; and galvanometers designed to move the mirrors to steer light emitting from the light emitting source to the surface (col. 12, lines 46-57).

Kaufmann teaches a method and apparatus to control a drawing table attached to a computer, Harris provides the means to adapt a light projection system to a display device. It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Kaufmann the features as taught by Harris in order to enable the system to generate large, illuminated, multi-colored images for processing on the said drawing tablet.

12. Claims 17 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaufmann in view of Harris as applied to claims 16 and 38 respectively in item 11 hereinabove, and further in view of Quazi (USP 5,581,158).

Relative to claims 17 and 39, Kaufmann in view of Harris **does not teach** said drawing tablet wherein the light emitting source is constructed and arranged to vary its luminance.

Quazi **teaches** a lamp brightness control circuit with ambient light compensation (col. 2, lines 38-67 and col. 3, lines 1-4); Quazi further **teaches** a light emitting source constructed and arranged to vary its luminance (col. 11, lines 31-37).

Kaufmann in view of Harris teaches a method and apparatus to control a drawing table attached to a computer, with the means to adapt a light projection system to a display device. Quazi teaches a circuit for controlling the brightness of a lamp to maintain a desired light level. It

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would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Kaufmann in view of Harris the feature as taught by Quazi in order to make available the means to vary a light level to maintain a desired level of illumination.

13. Claims 18 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaufmann as applied to claim 2 in item 3 hereinabove, and further in view of Mizutani et al.(USP 6,590,548).

Regarding claims 18 and 40, Kaufmann **does not teach** an additional light source to increase contrast of the image on the surface as captured by the imaging sensor.

Mizutani et al. **teaches** a display apparatus and an image input apparatus used for the same (col. 3, lines 32-67; col. 4, lines 1-67; col. 5, lines 1-67 and col. 6, lines 1-54); Mizutani et al. further **teaches** a light source to increase contrast of the image on the surface as captured by the imaging sensor (col. 1, lines 65-67 and col. 2, lines 1-3).

Kaufmann discloses an apparatus to control a drawing machine attached to a computer wherein the drawing means are attached to a computer by means of cables. Mizutani et al. teaches varying the brightness of a display background light. It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Kaufmann the feature as taught by Mizutani et al. in order to enhance the viewing of a displayed image.

14. Claims 20-22, 25-27 and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaufmann as applied to claim 2 in item 3 hereinabove, and further in view of Lovell et al.

Relative to claims 20 and 29 and 30, Kaufmann **does not teach** said transmitting a captured

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image to a computer and processing the captured image on the computer for display on a monitor.

Lovelle et al. **teaches** transmitting a captured image to a computer and processing the captured image on the computer for display on a monitor (col. 15, lines 61-65; col. 16, lines 9-16 and Fig. 11).

Kaufmann teaches a method and apparatus to control a drawing table attached to a computer, Lovelle et al. teaches the means for displaying an image on a computer monitor being drawn on a drawing tablet. It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Kaufmann the feature as taught by Lovelle et al. in order to provide the means to project on a monitor the image that is being generated on the drawing tablet for review or observation by others.

Regarding claim 21, Kaufmann **does not teach** said drawing table wherein the transmission means comprises a wireless transmitter designed to wirelessly transmit the image to a wireless receiver coupled to a the computer.

Kaufmann discloses an apparatus to control a drawing machine attached to a computer wherein the drawing means are attached to a computer by means of cables. It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide the device as taught by Kaufmann with wireless transmission means in order to adapt the system for use in an environment where the use of cabling is not a practical means for communicating between the drawing tablet and the system computer.

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As to claim 22, Lovell et al. further **teaches** a drawing tablet comprising software in a computer designed to animate at least a portion of the image (col. 25, lines 30-68; col. 26, lines 1-23; Abstract and Fig. 11).

Regarding claim 25, Kaufmann **does not teach** said drawing tablet wherein a method step comprises repeating at intervals the steps of capturing, transmitting and processing. It would have been obvious to a person of ordinary skill in the art at the time of the invention that the sequence of steps of repeating at intervals the steps of capturing, transmitting and processing image data is a common practice and well known in the art of processing the build up of an image for display.

Relative to claim 26, Kaufmann **teaches** the method step comprising updating the image on the surface of the drawing tablet (col. 1, lines 49-55).

Regarding claim 27, Kaufmann further **teaches** the method step comprising projecting a light onto the drawing tablet (col. 2, lines 39-42).

Allowable Subject Matter

14. Claims 23-24, 28, 32-34 and 42 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Relative to claim 18, the major difference between the teachings of the said prior art of record and that of the instant invention is that said prior art of record **does not teach** a drawing tablet further comprising an additional light source to increase contrast of the image on the surface as captured by the imaging sensor.

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Relative to claims 23 and 32, the major difference between the teachings of the said prior art of record and that of the instant invention is that said prior art of record **does not teach** the method step wherein animating at least a portion of the captured image includes animating the portion of the captured image based on the contents of the captured image.

Regarding claims 24 and 33 the major difference between the teachings of the said prior art of record and that of the instant invention is that said prior art of record **does not teach** the method step wherein animating the portion of the captured image includes animating the portion of the captured image bases on a change in the contents of the captured image.

Relative to claim 28, the major difference between the teachings of the said prior art of record and that of the instant invention is that said prior art of record **does not teach** the method step comprising capturing a change in the captured image; and measuring how accurately the change follows the projected light.

Regarding claim 34, the major difference between the teachings of the said prior art of record and that of the instant invention is that said prior art of record **does not teach** and article wherein modifying the image based on a change from a prior image includes animating the image based o the change.

Relative to claim 42, the major difference between the teachings of the said prior art of record and that of the instant invention is that said prior art or record **does not teach** a method comprising capturing a change in the captured image; and measuring how accurately the change follows the projected light.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure

U. S. Patent No.	6,448,544	Stanton et al.
U. S. Patent No.	6,337,681	Martin
U. S. Patent No.	5,548,417	Sekimoto et al.
U. S. Patent No.	4,232,358	Nichols

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

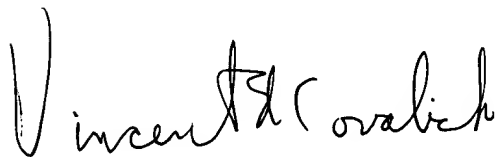
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Responses

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vincent E Kovalick whose telephone number is 703 306-3020. The examiner can normally be reached on Monday-Thursday 7:30- 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 703 305-4938. The fax phone numbers for the organization where this application or proceeding is assigned are 703 872-9314 for regular communications and 703 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 306-0377.



Vincent E. Kovalick
August 1, 2003



BIPIN SHALWALA
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